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Spaceport News

John F. Kennedy Space Center - America's gateway to the universe

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Cabana emphasizes importance of safety

I hope from my comments at the all hands, you were able to get some sense of the excitement I have about being part of this outstanding team during a historic time in our nation's space program.

I can't think of anywhere I'd rather be as we complete the International Space Station and prepare to launch the first new human spacecraft the United States has flown in over 25 years.

During the months ahead, I'd like to use my column in the Spaceport News to discuss topics that are important to me and I think are important to our success as a center.

For my first column I want to pick a subject dear to my heart -- safety. I want everyone to understand how important safety is to me and how committed I am to ensuring a safe work environment for all our employees. I will do my very best to use our center resources to "buy down" the risk from hazards that are identified in our safety walk-throughs and visits to the various work sites around the center.

In our core values of safety, teamwork, integrity and excellence, safety ranks first. Nothing we do is so important that we can't do it safely.

But do you really believe that, have you accepted it? As a contractor/civil service team, are we really working together to make our work environment at Kennedy safer for everyone?

If we truly believe safety, teamwork, integrity and excellence are our core values, then we are going to see improvement in our combined incident rate because safety will be ingrained in all that we do. Teamwork will mean looking out for each other and taking care of our teammates by pointing out to them when they're doing something unsafe or correcting a problem before someone gets hurt.

We will have the integrity to follow through and make things right. To ensure mission success, we will be true professionals, conducting our tasks safely, by the book, without taking short cuts or putting people at risk and we will be recognized for our excellence.

We will never have a truly effective safety program until all of us realize that safety is our responsibility, not management's or safety and mission assurance officers', but ours. We have to own it and take responsibility for it. It has to be at our very core and part of everything we do.

I'd like you also to consider that safety doesn't begin or end as we pass through the gates on our way home. If we're truly committed to doing things safely, we're going

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NASA/Jim Grossman

Kennedy Space Center Director Bob Cabana answered workers' questions at the All Hands Meeting on Nov. 4 in the Training Auditorium.

NASA

Bob Cabana, STS-88 mission commander, totes a notebook while checking on the progress of readiness tasks aboard the International Space Station's Unity module in 1998.

WORD ON THE STREET

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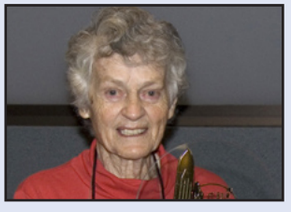

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Whitehead earns NASA Lifetime Achievement Award

As a young girl, Virginia Whitehead could identify the planets and even knew the names of the stars. Little did she know then, that she would end up as one of NASA's brightest as she received the Lifetime Achievement Award from NASA Administrator Mike Griffin on Oct. 30.

For many, 50 years seems like a lifetime. But that's how old Whitehead was when she *started* working here at Kennedy Space Center -- 34 years ago.

Whitehead has served so many roles with NASA, from writing to reducing data, to serving as an ISS payload director.

"I have been given this award for just having fun all these years," Whitehead said. "I just liked working with everybody to get stuff done."

And she's not done yet, as law school remains in her plans.

"I still toy with the idea," she said. "I just want to be able to help people who need help."

NASA/Kim Shiflett

Virginia Whitehead receives NASA's Lifetime Achievement Award from NASA Administrator Mike Griffin at a ceremony shortly before the STS-126 Flight Readiness Review at the Operations and Support Building II on Oct. 30. Whitehead has worked at Kennedy Space Center for 34 years.

Her interest in rocketry began at Johns Hopkins' Applied Physics Lab in Maryland. Whitehead's duties there included interpreting data for Wallops Flight Facility missile launches in Virginia.

She then applied her knowledge at a California observatory, in the missile industry again, and eventually at NASA's White Sands Test Facility in New Mexico.

"All the rules they made at White Sands were based on what I did," she joked. "If I did it, they had to make a rule against it."

Although Whitehead kids that her methods are unconventional, many space pioneers valued her contributions. In fact, she says it was a lot of fun working with the German rocket scientists, who used to visit her home where she says she got to know them well.

"(Dr. Kurt) Debus, (Wernher) Von Braun and Karl Sendler used to come running into my office and grab the film out of my hands," she said. "When I was out there, it was all optical data. Telemetry was just getting started. I would tell them how fast a missile was moving and if it was rolling or turning."

In 2003, Whitehead was given NASA's You Make a Difference Award, which recognizes employees who have set examples of high energy and are team players.

Something that might surprise those who have known Whitehead for all these years -- in 1964, when Cocoa Beach Jr./Sr. High opened its doors, Whitehead asked them if she could teach math. Of course, she was hired on the spot. One of her algebra students also rose in the ranks at NASA -- former Center Director Jim Kennedy.

Disability awareness presentation features stroke survivor

By Linda Herridge
Spaceport News

Focus on abilities rather than disabilities -- that's the message Kate Adamson brought to Kennedy Space Center workers during a National Disability Employment Awareness Month event.

The presentation, delivered by the brain-stem stroke survivor and national speaker, was sponsored by the Disability Awareness and Action Working Group, or DAAWG.

Helping to welcome Adamson were Kennedy Deputy Director Janet Petro and Chief Financial Officer and DAAWG Executive Advisor Susan Kroskey.

Adamson, author of "Paralyzed but not Powerless," described her experiences and the long road to overcoming Locked-in Syndrome, or total paralysis, from a double brain-stem stroke at the age of 33.

The mother of two toddlers could see and hear but had no way to communicate or move. She remained in this condition for 70 days and then spent another three months in acute rehabilitation. When doctors wrote her off, her husband discovered that she could communicate by blinking her eyes.

"A support system is very important," Adamson said. "During a crisis we find out who our true friends are."

She challenged Kennedy workers to think of the good things that can come from a disability.

"Working together we can overcome obstacles," Adamson said. "Don't think about what you can't do; instead, focus on what you can do."

Tara Gillam, manager of Kennedy's Office of Diversity and Equal Opportunity, said that right now the Kennedy work force is diverse, but less than one percent are individuals with targeted disabilities.

"We all need to open our hearts and our minds," Gillam said. "We must look beyond the wheel chair, or the leg braces, the cane, or the interpreter, and see the talent that we have only begun to tap."

During the presentation, the DAAWG committee recognized Sam Gutierrez for his support and efforts on behalf of the working group. Gutierrez helped create the new DAAWG logo and was an active committee member for many years.

After the presentation, representatives from local organizations and companies answered questions and provided information about the services and products available for the disabled.

Participants included the Brevard Achievement Center, Brevard Drop-in-Center, LifeBridge Diagnostics, National Stroke Association, Kennedy's Re-hab Works, Kennedy Adapted Physical Activity Program, Southeastern Guide Dogs Inc., the Tourette Syndrome Association of Florida-Brevard Chapter, and Visioneers.

NASA/Dimitri Gerondidakis

Segments of the Ares I-X upper stage simulator are lined up in the cargo hold of the Delta Mariner, docked at Port Canaveral. The upper stage simulator will be used in the Ares I-X test flight targeted for 2009. The segments will simulate the mass and the outer mold line and will be more than 100 feet of the total vehicle height of 327 feet. The simulator comprises 11 segments that are approximately 18 feet in diameter. Most of the segments will be approximately 10 feet high, ranging in weight from 18,000 to 60,000 pounds, for a total of approximately 450,000 pounds.

First rocket parts of new launch system arrive at KSC

The first major flight hardware of the Ares I-X rocket has arrived in Florida to begin preparation for the inaugural test flight of the agency's next-generation launch system. The test flight is targeted for July 12, 2009.

The Ares I-X upper stage simulator traveled to Port Canaveral aboard the Delta Mariner, a ship that also transports the Delta IV rocket for United Launch Alliance. The journey began Oct. 22 on the Ohio River as the barge traveled toward the Mississippi River for its voyage to Port Canaveral. The flight hardware has been moved off the barge into high bay 4 of the Vehicle Assembly Building at Kennedy Space Center.

The upper stage simulator consists of 11 individual components that were designed and manufactured during a two-year period at NASA's Glenn Research Center in Cleveland. The components represent the size, outer shape and weight of the second stage of the Ares I rocket, and will be integrated together in the Vehicle Assembly Building. The upper stage simulator eventually will be stacked atop the solid rocket booster segments of the Ares I-X rocket.

The Ares I-X test flight will provide NASA an early opportunity to test hardware, facilities and ground operations associated with the Ares I crew launch vehicle.

It also will allow NASA to gather critical data during ascent of the integrated Orion crew exploration vehicle and the Ares I rocket.

The data will ensure the entire vehicle system is safe and fully operational before astronauts begin traveling into orbit.

Want to learn more?

Video of the arrival activities are available on NASA Television's video file feed. For NASA TV streaming video, schedules and downlink information, visit: **www.nasa.gov/ntv**

For more information about the Ares I-X and NASA's next-generation spacecraft, visit: **www.nasa.gov/ares**

Sharing, caring highlight Make a Difference Day

Make a Difference Day is the most encompassing national day of helping others -- a celebration of neighbors helping neighbors.

And this year's event Oct. 24 was no different as the Federally Employed Women - Space Coast Chapter put a call out to members and employees at Kennedy Space Center to fill boxes for the Brevard Sharing Center and to assist in furnishing the new Salvation Army Domestic Violence Center.

The response was overwhelming as members and employees opened their hearts and pocketbooks and came through for their community.

In the past the chapter has performed tasks such as painting, providing new curtains and bedspreads, landscaping, providing diapers, collecting food -- whatever was required in the community.

An educational scholarship program was established in 1976 for members and students in the county that continues today.

NASA/Jim Grossman

Dan Tran and Anthony Edward, of the IT Office, volunteered to help out during Make a Difference Day by transporting collected items to the local Brevard Sharing Center & Salvation Army Domestic Violence Center on Oct. 24. The event was hosted by the local chapter of the Federally Employed Women.

Scene Around Kennedy Space C

Ed Hamill flies an Air Force Reserve biplane.

An F-18 flies in formation with an F4U Corsair.

Highlights of the 2008 Kennedy Space Center Space and Air Show inclu

Air show takes breaths away

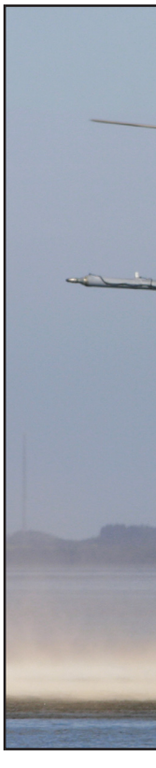
Distant relatives of the space shuttle adorned the skies over Kennedy Space Center during the 2008 Space & Air Show on Nov. 7-9.

The Navy's Blue Angels, an F-16 Fighting Falcon, an F/A-18 Super Hornet and other aircraft provided thousands of spectators -- an estimated 10,000 each day -- with an experience they soon won't forget.

The 920th, based out of Patrick Air Force Base, demonstrated a daring water rescue. The Screaming Eagles provided a few oohs and aahs with their air assault operations.

The aircraft staged the air show from the same Kennedy runway used by space shuttles returning from space.

Mike Goulian maneuvers his EXTRA300SHP aircraft.



Patrick Ai

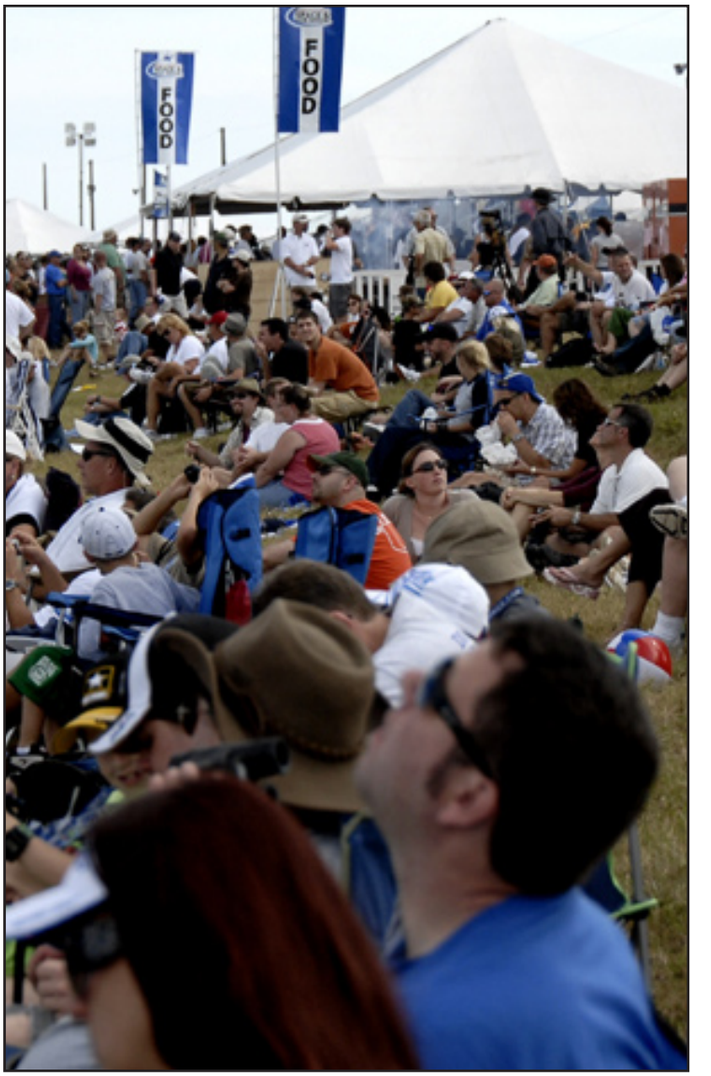
enter: 2008 Space and Air Show

NASA photos

uded the Navy's elite flight demonstration squadron, the Blue Angels.

r Force Base's 920th Rescue Wing demonstrates a water rescue.

The Screaming Eagles Parachute Demonstration Team wowed the crowd with several cool chutes.



Thousands of visitors kept their eye on the sky during the Space & Air Show at Kennedy Space Center.

Launch Services Program reaches 10-year mark

By Linda Herridge
Spaceport News

NASA's Launch Services Program, or LSP, recently celebrated its 10-year anniversary at Kennedy Space Center -- an important milestone in the agency's history of successful rocket-launched missions.

The year was 1998, and the precursor to LSP -- the Expendable Launch Vehicle Program, or ELV -- was established on the Space Coast. Engineering teams from NASA's Goddard Space Flight Center, with its management of Pegasus and Delta II launches, and Lewis Research Center (renamed Glenn Research Center), with its management of Atlas launches, combined with Kennedy's ground operations team.

According to former LSP Deputy Director Ray Lugo, plans to bring the program to Kennedy began in 1996, around the time he joined NASA's ELV Directorate. Though Lugo departed Kennedy in Dec. 2007 to become deputy director of NASA's Glenn Research Center, he remembers the transition well.

"Kennedy started taking on some of the responsibilities for the program," Lugo said. "It just made sense to consolidate and bring the program here. We looked at best practices from across the agency and the strengths from each center's approaches."

The transition was critical because several high-visibility missions were scheduled to launch, including two Mars missions and Stardust. "We pushed extra hard; it was important for us to be successful," Lugo said.

Now, more than 50 missions later, Lugo said LSP's efforts to put the right people, processes and procedures in place helped to ensure NASA's record of acquiring and launching successful missions.

LSP Manager Steve Francois worked on expendable launch vehicle missions before the program was established at Kennedy. He returned to the program in 2000. "The real success of the program is due to the diligence and hard work of the people and their contributions to each mission, year after year," Francois said.

NASA file

A Delta II rocket lifts the Phoenix spacecraft toward Mars in one of the many successful launches by the Launch Services Program. The LSP was established for NASA's acquisition and program management of expendable launch vehicle missions.

Darren Bedell, the program systems integration manager, came to Kennedy in August 1998 from Goddard's Orbital Launch Services Project located in Huntington Beach, Calif. "My role was to specifically formulate the mission integration function and help the program transition from the other centers," Bedell said.

The Mars Reconnaissance Orbiter was the first NASA mission to use the new Atlas V launch vehicle. "The LSP technical management team did an incredible job so that NASA would be ready for the launch of this important mission," Bedell said.

Transferring from Goddard, Marisa Achee came to Kennedy to become a program manager for Boeing in 1998. Now with A.I. Solutions, Achee has supported LSP for 11 years. Her most memorable launch was ARGOS, with NASA-sponsored secondary payloads Orsted from Denmark and SUNSAT from South Africa in Feb. 1999, from Vandenberg Air Force Base in California.

"It took 11 attempts," Achee said. "We supported the mission integration process and made several trips to both countries. My hope is that we continue our 100 percent success record by maintaining the superior technical capability of our engineers."

Senior Launch Director Chuck Dovale came to the ELV Program in 1984. His mission highlight was serving as launch director for the Phoenix mission in August 2007. "It was challenging to launch successfully within the tight Mars planetary window." Dovale was invited to the Jet Propulsion Laboratory in Pasadena, Calif., about seven months later to witness the spacecraft's landing on Mars.

"LSP should continue to be 'Earth's Bridge to Space,' and I look forward to doing my part and maintaining its record of success," Dovale said.

LSP Launch Director Omar Baez came to LSP from the Space Shuttle Program and has supported expendable launch vehicles for 15 years. The first offices were located at the E&O Building at Cape Canaveral Air Force Station, and now are on the third floor of Kennedy's Operations and Checkout Building.

Baez hopes the program will continue to evolve. "I hope we can keep up the pace and maybe get two or three steps ahead of our environment, which is the key to getting great projects to work on," Baez said.

Lugo said the key was not to underestimate Kennedy's abilities. "If you give workers the opportunities to stretch their abilities you'll be surprised at what you can accomplish."

Launch Services Program workers share their memories and thoughts

John Giles, launch approval engineer

"The first four planetary missions, right after LSP became a program at KSC."

Jeerapong Wongchote, avionics engineer

"I've always had a passion for space-related things."

Timothy Widrick, discipline expert, loads and dynamics

"Watching EOS-Terra liftoff on an Atlas IIAS was very gratifying."

Teresa Kinney, structural dynamics and loads analyst

"Launch of Phoenix -- to see it launch and land on Mars."

Heather Barthelme, co-op student

"Came to LSP to learn about dynamics and controls."

James Ristow, structural dynamics and loads analyst

"The level of knowledge and expertise here in the LSP. It's a good place to learn."

Crawlerway construction paved way for Apollo

By Kay Grinter
Reference Librarian

NASA file

After excavation, more than 3,000,000 cubic yards of hydraulic sand fill was placed along the route from the Vehicle Assembly Building to the launch compound. Alabama River rock was placed to a depth of eight inches on curves and four inches on straightway sections as the top surface.

For NASA engineers, the early days of the Apollo Program were all about making the right decisions. Choosing the right launch site, capsule concept, rocket design and launch method created more than a few headaches. As the rocket and spacecraft designs came into focus, the mobile launch concept came under consideration.

The advantage of a mobile concept lay in its promise of faster launch operations. Instead of rocket components being mated and checked out on a pad, which was then unavailable for other uses, the vehicle could be integrated and tests conducted in an assembly building a remote distance from the launch site. A brief checkout process at the pad could verify the rocket systems were ready for launch.

There were other advantages to a mobile system, as well. An assembly building could protect launch vehicles from Cape Canaveral's tropical weather and salt air. Housing the work force in one assembly building, rather than requiring multiple teams on numerous pads, might also save in labor costs.

Once the mobile concept was adopted, construction of the Vehicle Assembly Building, or VAB -- referred to as the Vertical Assembly Building at its inception -- began in July 1963, as did construction of the three mobile launchers, the platforms that support the rocket before launch and become, in effect, the pad's surface.

NASA selected a giant transporter, or crawler, that moves along a specially designed roadbed, rather than a barge or rail system, as the method of transportation for the integrated Apollo/Saturn V from the assembly building to the pad.

Remembering Our Heritage

The crawlerway was designed by the U.S. Army Corps of Engineers and built by a joint venture of the Blount Brothers Construction Company of Montgomery, Ala., and M. M. Sundt Construction Company of Tucson, Ariz. Construction of the 18,159-foot stretch of the roadway between the VAB and the site for Kennedy Space Center's Launch Complex 39A got under way in November 1963. At that time, work also began on the pad under the same contract.

The crawlerway provided a traveling surface for the transporter between the VAB and the launch complex's twin pads consisting of two 40-foot-wide lanes separated by a 50-foot median.

To support the 17,000,000-pound load of a transporter carrying an integrated Apollo/Saturn V atop a mobile launcher, the roadbed averaged seven feet in thickness.

Under maximum load conditions in high winds, each one of the four dual-tractor units of the transporter can exert 5,400,000 pounds of pressure on the roadbed, or more than 12,000 pounds per square foot. The access tunnels for any ducts or pipes that would pass beneath the crawlerway had to be capable of withstanding the load conditions, as well.

The approach to construction of the crawlerway was similar to that for a causeway. After the softer material was excavated, more than 3,000,000 cubic yards of hydraulic sand fill was placed along the route. The fill was compacted with vibratory rollers and then proof-rolled with a 100-ton roller.

Three and a half feet of selected sub-base material under three feet of graded crushed aggregate base course made up the roadbed, with a blacktop sealer topping it off. River gravel was placed to a depth of eight inches on curves and four inches on straightway sections for the top surface on which the transporter maneuvers.

The initial section of the crawlerway leading to Pad A was ready for transporter traffic in August 1965.

The finishing touches to Pad A followed in December 1965 at a total cost of $21,500,000. Pad B, constructed between December 1964 and April 1967, cost a little less at $20,300,000.

The crawlerway was cheap by comparison, coming in at $7,500,000 over all.

Not only were the mobile concept and its infrastructure used during the Apollo Program, but they continue to serve the Space Shuttle Program to the present day.

The same pads, assembly building, transporters, mobile launcher platforms and crawlerway will be upgraded and modified to support the Ares rockets and Orion crew module of the Constellation Program, NASA's next-generation human space program.

NASA file

STS-88 Mission Specialist Nancy Currie gets a hug from Commander Bob Cabana after landing.

From **CABANA**, Page 1

to take it home with us also. As the holiday season approaches, there are plenty of opportunities for an incident at home. We need everyone healthy if we're going to succeed, and more importantly, your families need you healthy to provide and care for them. Don't be that bad example at the safety brief that shows how not to do a job.

So take some time and step back and ask yourself if you're really committed to safety as a core value. Have you taken ownership of it, or do you feel safety is someone else's responsibility?

We've got a tremendous challenge in front of us the next few years and we can't afford to fail.

We will not be successful if safety is not at our core. Think about it, take ownership of it, and be safe at home and on the job.

Keep charging!
Bob

Looking up and ahead

Target Nov. 14	Launch/KSC: Endeavour, STS-126; 7:55 p.m.
No earlier than Nov. 16	Launch/CCAFS: Delta IV, NROL-26; TBD
Feb. 4, 2009	Launch/CCAFS: Delta II, NOAA-N Prime; TBD
Target Feb. 12, 2009	Launch/KSC: Discovery, STS-119; 7:36 a.m.
No earlier than March 5, 2009	Launch/CCAFS: Delta IV, GOES-O; TBD
Scheduled for March 5, 2009	Launch/CCAFS: Delta II, Kepler; TBD
No earlier than April 1, 2009	Launch/CCAFS: Delta II, STSS; TBD
April 24, 2009	Launch/CCAFS: Atlas V, LRO/LCROSS; TBD
Target May 15, 2009	Launch/KSC: Endeavour, STS-127; 4:52 p.m.
Target July 12, 2009	Launch/KSC: Ares I-X Test Flight/Launch Pad 39B; TBD
Target July 30, 2009	Launch/KSC: Atlantis, STS-128; TBD
Target Oct. 15, 2009	Launch/KSC: Discovery, STS-129; TBD
Target Dec. 10, 2009	Launch/KSC: Endeavour, STS-130; TBD
Scheduled for Jan. 26, 2010	Launch/CCAFS: Atlas V, SDO; TBD
Target Feb. 11, 2010	Launch/KSC: Atlantis, STS-131; TBD
Target April 8, 2010	Launch/KSC: Discovery, STS-132; TBD
Target May 31, 2010	Launch/KSC: Endeavour, STS-133; TBD

Register for PM Challenge 2009

The Project Management Challenge Conference is several months away, but registration runs through Jan. 30. For more information, visit: **http://pmchallenge.gsfc.nasa.gov**

WORD ON THE STREET

What goal, or goals, would you like the new center director to focus on?

"Consider a small trolley from the parking lots, and update and modernize our environment."
Mary Clark,
with the NASA Exchange

"Hopefully he won't leave a gap that's too critical to either the shuttle or Constellation programs."
Abel Gomes,
logistics specialist with REDE/Critique Inc.

"Working with the new vice president (Joe Biden), Sen. Bill Nelson and NASA's visions."
William Thomas,
ground systems engineer with NASA

"Just keep us informed about what's going on with the transition from shuttle to Constellation."
Jerry LaMott,
staff engineer with United Space Alliance

"To hopefully continue the shuttle so we don't have to depend on other countries."
Jessa Bautista,
with Kennedy Space Center Credit Union

John F. Kennedy Space Center

Spaceport News

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